



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/807,791 | 03/24/2004 | Felipe O. Simoes | 555255012725 | 4249 |

7590 12/13/2006
Lorri W. Cooper, Esq.
Jones Day
901 Lakeside Avenue/North Point
Cleveland, OH 44114

| EXAMINER |
|----------|
|----------|

HUYNH, NAM TRUNG

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2617 | |

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/807,791 | SIMOES ET AL. | |
| | Examiner | Art Unit | |
| | Nam Huynh | 2617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/11/2006 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-22 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao (US 6,774,603) in view of Wu (US 5,744,934).

Art Unit: 2617

A. Regarding claims 1, 5, 7, 12-14, 15, 31, Liao discloses a multi-function charger (charging unit) that comprises the following components:

- A means to convert AC power to DC power (power converter) (column 3, lines 48-67).
- An input end (electrical contact) (figure 2, item 13) located on a circuit board for receiving an input voltage.
- An output cord (figure 4, item 15) and plug (figure 4, item 27) (output assembly) for charging the battery of a mobile device.
- An adapter plug (plug) (figure 8, item 66) and input cord (power cord) (figure 8, item 65) that permits the charging unit to be positioned at a remote location from the outlet.

Liao discloses a plug (figure 8, item 64) that is detachable from an input end (figure 8, item 13), which may also render the input assembly because of its detachability.

However, Liao does not explicitly disclose the claimed structure of the charging unit and input assembly. More specifically, the limitations regarding a base wall with a receptacle defined within and an adapter with an electrical contact having a front face for removable attachment with the electrical contact of the receptacle where the first input assembly face faces the receptacle. Wu discloses a power supply device comprising a rectangular top chamber (figure 1, item 11) (receptacle) that includes terminals (figure 1, items 11, 13) (contacts) for receiving contacts of an AC plug (figure 3, item 42) or a DC plug (figure 4, item 53) (adapter). As can be seen in the figures 3 and 4, the plug faces the top chamber. Therefore it would have been obvious to one of

Art Unit: 2617

ordinary skill in the art at the time the invention was made to modify the input end of Liao and allow it to be detachable/interchangeable from the multi-function charger in a manner taught by Wu, in order to allow a user to alternatively use different power plug interfaces to fit different specifications of power supply outlets. The addition of a top chamber/plug structure also provides a more secure means of attachment to the multi-function charger. Furthermore, in the combination of both inventions, the storing of power for independent use is not taught in the detachable portions.

B. Regarding claim 2, the plug of Wu is intended to allow the power supply device to be configured to mate with an electrical outlet and is positioned adjacent to the outlet (figures 3 and 4).

C. Regarding claims 3, 4, and 32, Liao shows a USB connector (figure 2, item 31) and a cord (figure 2, item 30).

D. Regarding claim 6, Liao shows a mounting chamber (figure 2, item 28) (docking station).

E. Regarding claims 8-11, 17, 18, and 21, Wu shows a latching mechanism to latch the plug into the chamber comprising a coupling groove (figure 1, item 44) (recess) on the plug, a tongue (figure 1, item 111) (arm) in the chamber, and a stop plate (figure 1, item 21) (release mechanism) for releasing the plug.

F. Regarding claim 16, the limitations are rejected as applied to claims 1 and 2.

G. Regarding claim 19, Wu shows in figure 4, a USB connector (item 31) and an output assembly (items 15, 27) for charging an electronic device at a location remote from the charging unit.

Art Unit: 2617

H. Regarding claim 20, the limitations are rejected as applied to claims 1 and 8.

Additionally, the combination of Liao and Wu discloses the plug of Wu detachable from the multi-function charger of Liao. Although in both embodiments of Wu, a connector for a wall socket and car socket (figures 3 and 4) is shown on the plug to interface directly to a power source, it is further obvious to one of ordinary skill in the art that the combination may further be modified to allow the plug to include an input end to receive a connector attached to a plug, which is taught by Liao. This configuration would allow the plug to form a "rear face" of the chamber and form a wall of the multi-function charger.

I. Regarding claims 31 and 34, the limitations are rejected as applied to claim 20.

J. Regarding claim 33, it is further obvious to one of ordinary skill in the art that any USB compatible device may be connected to the USB connector of Liao.

4. Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao (US 6,774,603) in view of Wu (US 5,744,934) as applied to claim 20 above, and further in view of McKee et al. (US 4,893,351).

A. Regarding claim 22, the combination of Liao and Wu discloses the limitations set forth in claim 20, but does not explicitly disclose that the locker (latching mechanism) comprises a pair of spring clips configured to engage a post defined in a receptacle. McKee et al. discloses a communication receiver with a latching receptacle and a connector cable with a mating plug (column 2, lines 30-39). In the scope of the invention, two spring members (spring clips) (figure 11, items 86, 88) are used to wrap around a mating plug (post) (figure 11, item 54). Therefore it would have been obvious

Art Unit: 2617

to one of ordinary skill in the art at the time the invention was made to modify the latching mechanism of the combination of Liao and Wu, to include the locking configuration of McKee et al., in order to securely lock the charging unit to the charging housing and allow the charging unit to be quickly removed when necessary.

B. Regarding claim 23, McKee et al. shows guide grooves (recess) (figure 9, item 58) in which the spring members latch on the mating plug.

C. Regarding claim 24, McKee et al. discloses a lever arm (figure 11, item 51) that when pushed in a downward direction or "plunging" direction, spreads the spring members apart which can be seen in figure 12.

D. Regarding claim 25, Wu discloses a coupling groove (figure 1, item 44) for guiding the

5. Claims 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao (US 6,774,603) in view of Wu (US 5,744,934) as applied to claim 20 above, and further in view of Wei et al. (US 6,371,535).

A. Regarding claim 26, the combination of Liao and Wu discloses the limitations set forth in claim 20 and the use of guide bars (figure 8, item 142a), but does not explicitly disclose detents that are used to engage spring biased ball bearings. Wei et al. discloses an easily releasable locking device for detachably securing a battery pack to a portable battery-powered apparatus (title). In the scope of the invention, spring loaded latching members (figure 3, items 23, 25) are configured to lock into detents of the engaging portion (figure 3, item 111). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the latching

Art Unit: 2617

mechanism of the combination of Liao and Wu, to include the latching/locking configuration taught by Wei et al., in order to allow the charging unit to be easily attached and removed from the charging housing.

B. Regarding claim 27, although none of the cited references explicitly discloses an L shaped cross-section, it would have been further obvious to one of ordinary skill in the art to design the shape of the guide bars or structure in order to meet specification and design criteria.

C. Regarding claims 28-30, Wei et al. teaches the use of a release mechanism (column 3, lines 44-57).

Response to Arguments

6. Applicant's arguments with respect to claims 1-34 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lin (US 2005/0085278)

Dixon (US 6,064,177)

Hahn (US 5,648,712)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam Huynh whose telephone number is 571-272-5970.


The examiner can normally be reached on 8 a.m.-5 p.m..

Art Unit: 2617

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NTH
12/11/06


GEORGE ENG
SUPERVISORY PATENT EXAMINER